

names for the various classes, owing to the great variety of shapes of the work to be drilled. There are, however, two general types that are most commonly used, the difference between them being very marked. These types may be classified as *open jigs* and *closed jigs*, or *box jigs*. Sometimes the jigs are called *clamping jigs*. The open jigs usually have all the drill bushings in the same plane, parallel with one another, and are not provided with loose or removable leaves, thereby making it possible to insert the piece to be drilled without any manipulation of the parts of the jig. These jigs are often of such a construction that they are applied to the work to be drilled, the jig being placed on the work, rather than the work being placed in the jig. The jig may lie held to the work by flaps, straps, bolts, or clamps, but in many cases the jig fits into or

over some finished part of the work and in this way the jig is located and held in position,

The closed drill jigs, or box jigs, frequently resemble some form of a box and are intended for pieces where the holes are to be drilled at various angles to one another. As a rule, the piece to be drilled can be inserted in the jig only after one or more leaves or covers have been swung out of the way. Sometimes it is necessary to remove a loose wall, which is held by bolts and dowel pins, in order to locate the piece¹ in the jig. The work in the closed drill jig may be held in place by set-screws, screw bushings, straps, or hook-bolts.

The combination drilling and boring jig is another type of closed jig designed to serve both for drilling and boring operations. Before designing a combination drill and

jig,

the relation between, and number of, the
drilled and
holes must be taken into consideration, and also
the size of the
piece to be machined. In case there is a
number of
it may be of advantage to have two or even more
jigs for the
same piece, because- it makes it easier to
and
the
jig, and very likely will give a better result.
The

drilled
or bored in the first jig may be used as a means
for

the
piece in the jigs used later on.
Combination drill and jigs are not very well
adapted for pieces of large *mm**